

ENSIGN

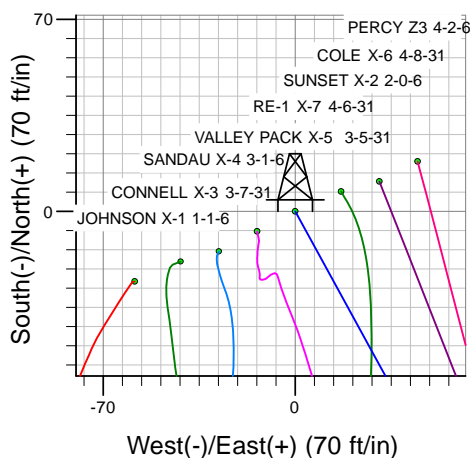
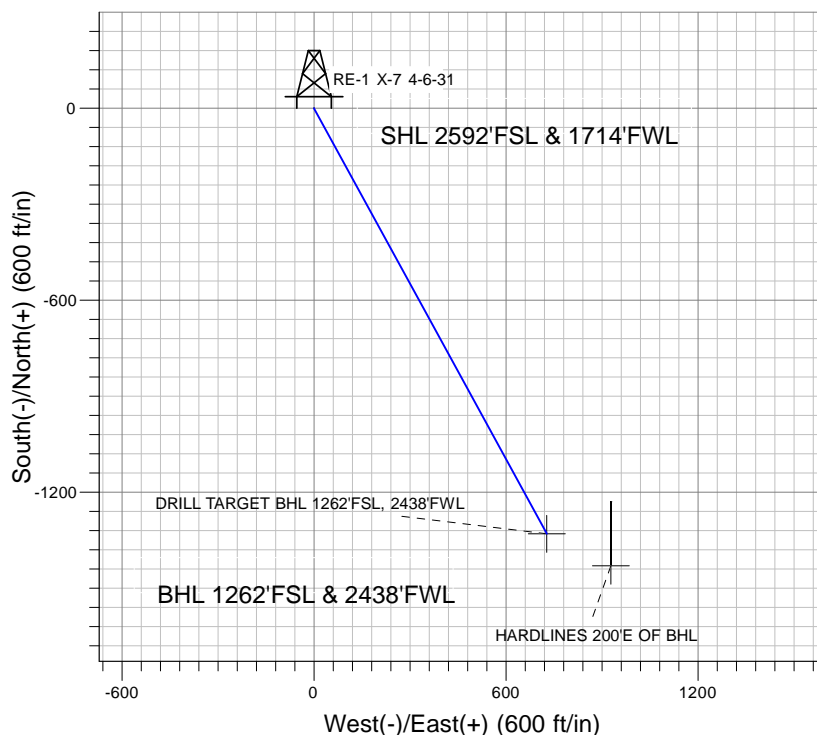
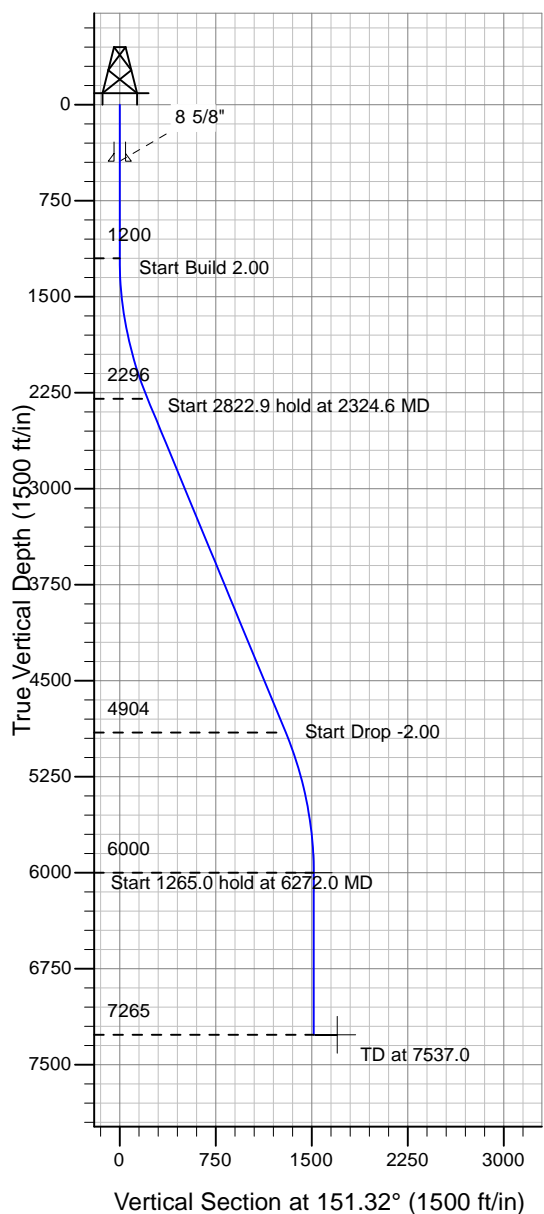
Directional

Well Name: RE-1 X-7 4-6-31

Surface Location: PAD X SEC.31-T5N-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4659.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1373363.85 3220287.02 40° 21' 20.124 N 104° 42' 34.416 W
 Original Well Elev WELL @ 4673.0ft (Original Well Elev)

Mineral Resources Inc



PAD X SEC.31-T5N-R65W
 RE-1 X-7 4-6-31
 Plan #5 (3-29-10)
 16:28, March 30 2010



Azimuths to True North
 Magnetic North: 8.99°
 Magnetic Field
 Strength: 53288.1nT
 Dip Angle: 67.08°
 Date: 12/31/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DRILL TARGET BHL 1262'FSL, 2438'FWL	6000.0	-1329.7	727.5	40° 21' 6.984 N	104° 42' 25.020 W	Point
HARDLINES 200'E OF BHL	7265.0	-1429.7	927.5	40° 21' 5.996 N	104° 42' 22.436 W	Polygon

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	2324.6	22.49	151.32	2295.9	-191.2	104.6	2.00	151.32	217.9	
4	5147.5	22.49	151.32	4904.1	-1138.5	622.9	0.00	0.00	1297.8	
5	6272.0	0.00	0.00	6000.0	-1329.7	727.5	2.00	180.00	1515.7	DRILL TARGET BHL 1262'FSL, 2438'FWL
6	7537.0	0.00	0.00	7265.0	-1329.7	727.5	0.00	0.00	1515.7	



Mineral Resources Inc

SEC.31-T5N-R65W

PAD X SEC.31-T5N-R65W

RE-1 X-7 4-6-31

Wellbore #1

Plan: Plan #5 (3-29-10)

Standard Planning Report

30 March, 2010

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Project:	SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site:	PAD X SEC.31-T5N-R65W	North Reference:	True
Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 (3-29-10)		

Project	SEC.31-T5N-R65W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	PAD X SEC.31-T5N-R65W		
Site Position:		Northing:	1,373,371.29ft
From:	Lat/Long	Easting:	3,220,303.68ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 21' 20.196 N
		Longitude:	104° 42' 34.200 W
		Grid Convergence:	0.51 °

Well	RE-1 X-7 4-6-31		
Well Position	+N/-S	-7.3 ft	Northing: 1,373,363.85 ft
	+E/-W	-16.7 ft	Easting: 3,220,287.02 ft
Position Uncertainty		0.0 ft	Wellhead Elevation: ft
			Latitude: 40° 21' 20.124 N
			Longitude: 104° 42' 34.416 W
			Ground Level: 4,659.0 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	1/29/2008	9.25
	IGRF200510	7/22/2008	9.19
	IGRF200510	12/31/2009	8.99
			Dip Angle (°)
			67.15
			67.13
			67.08
			Field Strength (nT)
			53,487
			53,437
			53,288

Design	Plan #5 (3-29-10)		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)
	0.0	0.0	0.0
			Direction (°)
			151.32

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,324.6	22.49	151.32	2,295.9	-191.2	104.6	2.00	2.00	0.00	151.32	
5,147.5	22.49	151.32	4,904.1	-1,138.5	622.9	0.00	0.00	0.00	0.00	
6,272.0	0.00	0.00	6,000.0	-1,329.7	727.5	2.00	-2.00	0.00	180.00	DRILL TARGET B-
7,537.0	0.00	0.00	7,265.0	-1,329.7	727.5	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Project:	SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site:	PAD X SEC.31-T5N-R65W	North Reference:	True
Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 (3-29-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.80	151.32	1,240.0	-0.2	0.1	0.3	2.00	2.00	0.00
1,280.0	1.60	151.32	1,280.0	-1.0	0.5	1.1	2.00	2.00	0.00
1,320.0	2.40	151.32	1,320.0	-2.2	1.2	2.5	2.00	2.00	0.00
1,360.0	3.20	151.32	1,359.9	-3.9	2.1	4.5	2.00	2.00	0.00
1,400.0	4.00	151.32	1,399.8	-6.1	3.3	7.0	2.00	2.00	0.00
1,440.0	4.80	151.32	1,439.7	-8.8	4.8	10.0	2.00	2.00	0.00
1,480.0	5.60	151.32	1,479.6	-12.0	6.6	13.7	2.00	2.00	0.00
1,520.0	6.40	151.32	1,519.3	-15.7	8.6	17.9	2.00	2.00	0.00
1,560.0	7.20	151.32	1,559.1	-19.8	10.8	22.6	2.00	2.00	0.00
1,600.0	8.00	151.32	1,598.7	-24.5	13.4	27.9	2.00	2.00	0.00
1,640.0	8.80	151.32	1,638.3	-29.6	16.2	33.7	2.00	2.00	0.00
1,680.0	9.60	151.32	1,677.8	-35.2	19.3	40.1	2.00	2.00	0.00
1,720.0	10.40	151.32	1,717.1	-41.3	22.6	47.1	2.00	2.00	0.00
1,760.0	11.20	151.32	1,756.4	-47.9	26.2	54.6	2.00	2.00	0.00
1,800.0	12.00	151.32	1,795.6	-54.9	30.0	62.6	2.00	2.00	0.00
1,840.0	12.80	151.32	1,834.7	-62.5	34.2	71.2	2.00	2.00	0.00
1,880.0	13.60	151.32	1,873.6	-70.5	38.6	80.3	2.00	2.00	0.00
1,920.0	14.40	151.32	1,912.4	-79.0	43.2	90.0	2.00	2.00	0.00
1,960.0	15.20	151.32	1,951.1	-87.9	48.1	100.2	2.00	2.00	0.00
2,000.0	16.00	151.32	1,989.6	-97.4	53.3	111.0	2.00	2.00	0.00
2,040.0	16.80	151.32	2,028.0	-107.3	58.7	122.3	2.00	2.00	0.00
2,080.0	17.60	151.32	2,066.2	-117.6	64.4	134.1	2.00	2.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Project:	SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site:	PAD X SEC.31-T5N-R65W	North Reference:	True
Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 (3-29-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,120.0	18.40	151.32	2,104.3	-128.5	70.3	146.5	2.00	2.00	0.00
2,160.0	19.20	151.32	2,142.1	-139.8	76.5	159.3	2.00	2.00	0.00
2,200.0	20.00	151.32	2,179.8	-151.6	82.9	172.8	2.00	2.00	0.00
2,240.0	20.80	151.32	2,217.3	-163.8	89.6	186.7	2.00	2.00	0.00
2,280.0	21.60	151.32	2,254.6	-176.5	96.6	201.2	2.00	2.00	0.00
2,320.0	22.40	151.32	2,291.7	-189.6	103.7	216.2	2.00	2.00	0.00
2,324.6	22.49	151.32	2,295.9	-191.2	104.6	217.9	2.00	2.00	0.00
2,360.0	22.49	151.32	2,328.6	-203.1	111.1	231.5	0.00	0.00	0.00
2,400.0	22.49	151.32	2,365.6	-216.5	118.4	246.8	0.00	0.00	0.00
2,440.0	22.49	151.32	2,402.6	-229.9	125.8	262.1	0.00	0.00	0.00
2,480.0	22.49	151.32	2,439.5	-243.3	133.1	277.4	0.00	0.00	0.00
2,520.0	22.49	151.32	2,476.5	-256.8	140.5	292.7	0.00	0.00	0.00
2,560.0	22.49	151.32	2,513.4	-270.2	147.8	308.0	0.00	0.00	0.00
2,600.0	22.49	151.32	2,550.4	-283.6	155.2	323.3	0.00	0.00	0.00
2,640.0	22.49	151.32	2,587.3	-297.0	162.5	338.6	0.00	0.00	0.00
2,680.0	22.49	151.32	2,624.3	-310.4	169.8	353.9	0.00	0.00	0.00
2,720.0	22.49	151.32	2,661.3	-323.9	177.2	369.2	0.00	0.00	0.00
2,760.0	22.49	151.32	2,698.2	-337.3	184.5	384.5	0.00	0.00	0.00
2,800.0	22.49	151.32	2,735.2	-350.7	191.9	399.8	0.00	0.00	0.00
2,840.0	22.49	151.32	2,772.1	-364.1	199.2	415.1	0.00	0.00	0.00
2,880.0	22.49	151.32	2,809.1	-377.6	206.6	430.4	0.00	0.00	0.00
2,920.0	22.49	151.32	2,846.1	-391.0	213.9	445.7	0.00	0.00	0.00
2,960.0	22.49	151.32	2,883.0	-404.4	221.3	461.0	0.00	0.00	0.00
3,000.0	22.49	151.32	2,920.0	-417.8	228.6	476.3	0.00	0.00	0.00
3,040.0	22.49	151.32	2,956.9	-431.3	235.9	491.6	0.00	0.00	0.00
3,080.0	22.49	151.32	2,993.9	-444.7	243.3	506.9	0.00	0.00	0.00
3,120.0	22.49	151.32	3,030.8	-458.1	250.6	522.2	0.00	0.00	0.00
3,160.0	22.49	151.32	3,067.8	-471.5	258.0	537.5	0.00	0.00	0.00
3,200.0	22.49	151.32	3,104.8	-485.0	265.3	552.8	0.00	0.00	0.00
3,240.0	22.49	151.32	3,141.7	-498.4	272.7	568.1	0.00	0.00	0.00
3,280.0	22.49	151.32	3,178.7	-511.8	280.0	583.4	0.00	0.00	0.00
3,320.0	22.49	151.32	3,215.6	-525.2	287.3	598.7	0.00	0.00	0.00
3,360.0	22.49	151.32	3,252.6	-538.7	294.7	614.0	0.00	0.00	0.00
3,400.0	22.49	151.32	3,289.5	-552.1	302.0	629.3	0.00	0.00	0.00
3,440.0	22.49	151.32	3,326.5	-565.5	309.4	644.6	0.00	0.00	0.00
3,480.0	22.49	151.32	3,363.5	-578.9	316.7	659.9	0.00	0.00	0.00
3,520.0	22.49	151.32	3,400.4	-592.4	324.1	675.2	0.00	0.00	0.00
3,560.0	22.49	151.32	3,437.4	-605.8	331.4	690.5	0.00	0.00	0.00
3,600.0	22.49	151.32	3,474.3	-619.2	338.8	705.8	0.00	0.00	0.00
3,640.0	22.49	151.32	3,511.3	-632.6	346.1	721.1	0.00	0.00	0.00
3,680.0	22.49	151.32	3,548.2	-646.1	353.4	736.4	0.00	0.00	0.00
3,720.0	22.49	151.32	3,585.2	-659.5	360.8	751.7	0.00	0.00	0.00
3,760.0	22.49	151.32	3,622.2	-672.9	368.1	767.0	0.00	0.00	0.00
3,800.0	22.49	151.32	3,659.1	-686.3	375.5	782.3	0.00	0.00	0.00
3,840.0	22.49	151.32	3,696.1	-699.7	382.8	797.6	0.00	0.00	0.00
3,880.0	22.49	151.32	3,733.0	-713.2	390.2	812.9	0.00	0.00	0.00
3,920.0	22.49	151.32	3,770.0	-726.6	397.5	828.2	0.00	0.00	0.00
3,960.0	22.49	151.32	3,806.9	-740.0	404.9	843.5	0.00	0.00	0.00
4,000.0	22.49	151.32	3,843.9	-753.4	412.2	858.8	0.00	0.00	0.00
4,040.0	22.49	151.32	3,880.9	-766.9	419.5	874.1	0.00	0.00	0.00
4,080.0	22.49	151.32	3,917.8	-780.3	426.9	889.4	0.00	0.00	0.00
4,120.0	22.49	151.32	3,954.8	-793.7	434.2	904.7	0.00	0.00	0.00
4,160.0	22.49	151.32	3,991.7	-807.1	441.6	920.0	0.00	0.00	0.00
4,200.0	22.49	151.32	4,028.7	-820.6	448.9	935.3	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Project:	SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site:	PAD X SEC.31-T5N-R65W	North Reference:	True
Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 (3-29-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,240.0	22.49	151.32	4,065.6	-834.0	456.3	950.6	0.00	0.00	0.00
4,280.0	22.49	151.32	4,102.6	-847.4	463.6	965.9	0.00	0.00	0.00
4,320.0	22.49	151.32	4,139.6	-860.8	471.0	981.2	0.00	0.00	0.00
4,360.0	22.49	151.32	4,176.5	-874.3	478.3	996.5	0.00	0.00	0.00
4,400.0	22.49	151.32	4,213.5	-887.7	485.6	1,011.8	0.00	0.00	0.00
4,440.0	22.49	151.32	4,250.4	-901.1	493.0	1,027.1	0.00	0.00	0.00
4,480.0	22.49	151.32	4,287.4	-914.5	500.3	1,042.4	0.00	0.00	0.00
4,520.0	22.49	151.32	4,324.4	-928.0	507.7	1,057.8	0.00	0.00	0.00
4,560.0	22.49	151.32	4,361.3	-941.4	515.0	1,073.1	0.00	0.00	0.00
4,600.0	22.49	151.32	4,398.3	-954.8	522.4	1,088.4	0.00	0.00	0.00
4,640.0	22.49	151.32	4,435.2	-968.2	529.7	1,103.7	0.00	0.00	0.00
4,680.0	22.49	151.32	4,472.2	-981.7	537.0	1,119.0	0.00	0.00	0.00
4,720.0	22.49	151.32	4,509.1	-995.1	544.4	1,134.3	0.00	0.00	0.00
4,760.0	22.49	151.32	4,546.1	-1,008.5	551.7	1,149.6	0.00	0.00	0.00
4,800.0	22.49	151.32	4,583.1	-1,021.9	559.1	1,164.9	0.00	0.00	0.00
4,840.0	22.49	151.32	4,620.0	-1,035.4	566.4	1,180.2	0.00	0.00	0.00
4,880.0	22.49	151.32	4,657.0	-1,048.8	573.8	1,195.5	0.00	0.00	0.00
4,920.0	22.49	151.32	4,693.9	-1,062.2	581.1	1,210.8	0.00	0.00	0.00
4,960.0	22.49	151.32	4,730.9	-1,075.6	588.5	1,226.1	0.00	0.00	0.00
5,000.0	22.49	151.32	4,767.8	-1,089.0	595.8	1,241.4	0.00	0.00	0.00
5,040.0	22.49	151.32	4,804.8	-1,102.5	603.1	1,256.7	0.00	0.00	0.00
5,080.0	22.49	151.32	4,841.8	-1,115.9	610.5	1,272.0	0.00	0.00	0.00
5,120.0	22.49	151.32	4,878.7	-1,129.3	617.8	1,287.3	0.00	0.00	0.00
5,147.5	22.49	151.32	4,904.1	-1,138.5	622.9	1,297.8	0.00	0.00	0.00
5,160.0	22.24	151.32	4,915.7	-1,142.7	625.2	1,302.6	2.00	-2.00	0.00
5,200.0	21.44	151.32	4,952.8	-1,155.8	632.3	1,317.4	2.00	-2.00	0.00
5,240.0	20.64	151.32	4,990.1	-1,168.4	639.2	1,331.8	2.00	-2.00	0.00
5,280.0	19.84	151.32	5,027.7	-1,180.5	645.8	1,345.6	2.00	-2.00	0.00
5,320.0	19.04	151.32	5,065.4	-1,192.2	652.2	1,358.9	2.00	-2.00	0.00
5,360.0	18.24	151.32	5,103.3	-1,203.4	658.4	1,371.7	2.00	-2.00	0.00
5,400.0	17.44	151.32	5,141.4	-1,214.2	664.2	1,384.0	2.00	-2.00	0.00
5,440.0	16.64	151.32	5,179.6	-1,224.4	669.9	1,395.7	2.00	-2.00	0.00
5,480.0	15.84	151.32	5,218.0	-1,234.3	675.2	1,406.9	2.00	-2.00	0.00
5,520.0	15.04	151.32	5,256.6	-1,243.6	680.4	1,417.5	2.00	-2.00	0.00
5,560.0	14.24	151.32	5,295.3	-1,252.5	685.2	1,427.7	2.00	-2.00	0.00
5,600.0	13.44	151.32	5,334.1	-1,260.9	689.8	1,437.2	2.00	-2.00	0.00
5,640.0	12.64	151.32	5,373.1	-1,268.8	694.1	1,446.3	2.00	-2.00	0.00
5,680.0	11.84	151.32	5,412.2	-1,276.2	698.2	1,454.7	2.00	-2.00	0.00
5,720.0	11.04	151.32	5,451.4	-1,283.2	702.0	1,462.7	2.00	-2.00	0.00
5,760.0	10.24	151.32	5,490.7	-1,289.7	705.6	1,470.1	2.00	-2.00	0.00
5,800.0	9.44	151.32	5,530.1	-1,295.7	708.8	1,476.9	2.00	-2.00	0.00
5,840.0	8.64	151.32	5,569.6	-1,301.2	711.9	1,483.2	2.00	-2.00	0.00
5,880.0	7.84	151.32	5,609.2	-1,306.2	714.6	1,488.9	2.00	-2.00	0.00
5,920.0	7.04	151.32	5,648.8	-1,310.8	717.1	1,494.1	2.00	-2.00	0.00
5,960.0	6.24	151.32	5,688.6	-1,314.8	719.3	1,498.7	2.00	-2.00	0.00
6,000.0	5.44	151.32	5,728.4	-1,318.4	721.3	1,502.8	2.00	-2.00	0.00
6,040.0	4.64	151.32	5,768.2	-1,321.5	723.0	1,506.3	2.00	-2.00	0.00
6,080.0	3.84	151.32	5,808.1	-1,324.1	724.4	1,509.3	2.00	-2.00	0.00
6,120.0	3.04	151.32	5,848.0	-1,326.2	725.5	1,511.7	2.00	-2.00	0.00
6,160.0	2.24	151.32	5,888.0	-1,327.8	726.4	1,513.5	2.00	-2.00	0.00
6,200.0	1.44	151.32	5,928.0	-1,328.9	727.0	1,514.8	2.00	-2.00	0.00
6,240.0	0.64	151.32	5,968.0	-1,329.5	727.4	1,515.5	2.00	-2.00	0.00
6,272.0	0.00	0.00	6,000.0	-1,329.7	727.5	1,515.7	2.00	-2.00	0.00
DRILL TARGET BHL 1262'FSL, 2438'FWL									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Project:	SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site:	PAD X SEC.31-T5N-R65W	North Reference:	True
Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 (3-29-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,280.0	0.00	0.00	6,008.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,048.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,088.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,128.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,168.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,208.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,248.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,288.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,328.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,368.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,408.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,448.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,488.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,528.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,568.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,608.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,648.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,688.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,728.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,022.0	0.00	0.00	6,750.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
NIOBRARA									
7,040.0	0.00	0.00	6,768.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,808.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,120.0	0.00	0.00	6,848.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,160.0	0.00	0.00	6,888.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,200.0	0.00	0.00	6,928.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,240.0	0.00	0.00	6,968.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,280.0	0.00	0.00	7,008.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,320.0	0.00	0.00	7,048.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,360.0	0.00	0.00	7,088.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,387.0	0.00	0.00	7,115.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
CODELL									
7,400.0	0.00	0.00	7,128.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,440.0	0.00	0.00	7,168.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,480.0	0.00	0.00	7,208.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,520.0	0.00	0.00	7,248.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
7,537.0	0.00	0.00	7,265.0	-1,329.7	727.5	1,515.7	0.00	0.00	0.00
HARDLINES 200'E OF BHL									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Company:	Mineral Resources Inc	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Project:	SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site:	PAD X SEC.31-T5N-R65W	North Reference:	True
Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #5 (3-29-10)		

Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
DRILL TARGET BHL	0.00	0.00	6,000.0	-1,329.7	727.5	1,372,040.74	3,221,026.27	40° 21' 6.984 N	104° 42' 25.020 W
- plan hits target center									
- Point									
HARDLINES 200'E O	0.00	0.00	7,265.0	-1,429.7	927.5	1,371,942.53	3,221,227.19	40° 21' 5.996 N	104° 42' 22.436 W
- plan misses target center by 223.6ft at 7537.0ft MD (7265.0 TVD, -1329.7 N, 727.5 E)									
- Polygon									
Point 1			7,265.0	0.0	0.0	1,371,942.53	3,221,227.19		
Point 2			7,265.0	200.0	0.0	1,372,142.52	3,221,225.41		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
440.0	440.0	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,022.0	6,750.0	NIOBRARA		0.00	
7,387.0	7,115.0	CODELL		0.00	



Mineral Resources Inc

SEC.31-T5N-R65W

PAD X SEC.31-T5N-R65W

RE-1 X-7 4-6-31

Wellbore #1

Plan #5 (3-29-10)

Anticollision Report

30 March, 2010

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

Reference	Plan #5 (3-29-10)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCSWA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 2,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	3/30/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,536.7	Plan #5 (3-29-10) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
PAD X SEC.31-T5N-R65W						
COLE X-6 4-8-31 - Wellbore #1 - Plan #7 (3-29-10)	500.0	500.0	32.5	30.5	16.090	CC
COLE X-6 4-8-31 - Wellbore #1 - Plan #7 (3-29-10)	600.0	599.8	32.8	30.3	13.402	ES
COLE X-6 4-8-31 - Wellbore #1 - Plan #7 (3-29-10)	700.0	698.9	35.1	32.2	12.229	SF
SUNSET X-2 2-0-6 - Wellbore #1 - Plan #7 (3-29-10)	200.0	200.0	18.2	17.6	27.051	CC, ES
SUNSET X-2 2-0-6 - Wellbore #1 - Plan #7 (3-29-10)	500.0	498.8	27.6	25.6	13.807	SF
VALLEY PACK X-5 3-5-31 - Wellbore #1 - Wellbore #1	0.0	0.0	15.7	15.7	10,000.000	CC
VALLEY PACK X-5 3-5-31 - Wellbore #1 - Wellbore #1	400.0	400.0	16.3	15.0	13.113	ES
VALLEY PACK X-5 3-5-31 - Wellbore #1 - Wellbore #1	1,500.0	1,499.5	22.2	16.4	3.832	SF
PAD Z SEC.31-T5N-R65W						
PERCY Z3 4-2-6 - Wellbore #1 - Plan #4 (3-29-10)	343.9	344.1	47.8	46.4	36.634	CC, ES
PERCY Z3 4-2-6 - Wellbore #1 - Plan #4 (3-29-10)	600.0	593.8	63.6	61.0	24.865	SF

Offset Design													Offset Site Error:	
PAD X SEC.31-T5N-R65W - COLE X-6 4-8-31 - Wellbore #1 - Plan #7 (3-29-10)													0.0 ft	
Survey Program: 0-MWD													Offset Well Error:	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	70.37	10.9	30.7	32.5					
100.0	100.0	100.0	100.0	0.1	0.1	70.37	10.9	30.7	32.5	32.3	0.22	144.812		
200.0	200.0	200.0	200.0	0.3	0.3	70.37	10.9	30.7	32.5	31.9	0.67	48.271		
300.0	300.0	300.0	300.0	0.6	0.6	70.37	10.9	30.7	32.5	31.4	1.12	28.962		
400.0	400.0	400.0	400.0	0.8	0.8	70.37	10.9	30.7	32.5	31.0	1.57	20.687		
500.0	500.0	500.0	500.0	1.0	1.0	70.37	10.9	30.7	32.5	30.5	2.02	16.090	CC	
504.0	504.0	504.0	504.0	1.0	1.0	70.38	10.9	30.7	32.5	30.5	2.04	15.957		
600.0	600.0	599.8	599.7	1.2	1.2	75.69	8.1	31.8	32.8	30.3	2.45	13.402	ES	
700.0	700.0	698.9	698.4	1.5	1.4	90.48	-0.3	35.1	35.1	32.2	2.87	12.229	SF	
800.0	800.0	796.5	794.9	1.7	1.7	109.07	-14.0	40.5	43.1	39.8	3.32	12.974		
900.0	900.0	892.1	888.3	1.9	2.0	124.26	-32.5	47.8	59.0	55.2	3.78	15.595		
1,000.0	1,000.0	985.0	977.9	2.1	2.4	134.31	-55.4	56.8	82.4	78.1	4.25	19.377		
1,100.0	1,100.0	1,074.8	1,063.0	2.4	2.9	140.65	-82.0	67.2	112.3	107.6	4.74	23.677		
1,200.0	1,200.0	1,161.1	1,143.3	2.6	3.5	144.74	-111.6	78.9	148.0	142.7	5.26	28.119		
1,300.0	1,300.0	1,248.6	1,223.0	2.8	4.1	-3.70	-145.1	92.1	186.7	181.0	5.70	32.782		
1,400.0	1,399.8	1,341.5	1,307.4	3.0	4.8	-1.72	-181.3	106.3	223.2	217.1	6.14	36.376		

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,500.0	1,499.5	1,435.6	1,392.9	3.2	5.6	-0.32	-217.9	120.7	256.6	250.0	6.58	38.992	
1,600.0	1,598.7	1,530.8	1,479.3	3.4	6.4	0.76	-255.0	135.3	286.8	279.8	7.06	40.651	
1,700.0	1,697.5	1,627.0	1,566.7	3.6	7.2	1.64	-292.4	150.1	313.7	306.2	7.55	41.567	
1,800.0	1,795.6	1,724.1	1,654.9	3.9	8.0	2.40	-330.2	165.0	337.3	329.3	8.06	41.870	
1,900.0	1,893.1	1,821.9	1,743.7	4.2	8.8	3.08	-368.3	179.9	357.6	349.0	8.58	41.674	
2,000.0	1,989.6	1,920.4	1,833.2	4.6	9.6	3.73	-406.6	195.0	374.5	365.4	9.12	41.068	
2,100.0	2,085.3	2,019.4	1,923.1	5.1	10.5	4.35	-445.2	210.2	388.0	378.3	9.67	40.124	
2,200.0	2,179.8	2,118.7	2,013.3	5.6	11.3	4.98	-483.9	225.4	398.1	387.8	10.23	38.900	
2,300.0	2,273.2	2,218.4	2,103.9	6.2	12.2	5.63	-522.7	240.7	404.7	393.9	10.81	37.443	
2,400.0	2,365.6	2,318.2	2,194.5	6.9	13.0	6.31	-561.5	256.0	409.0	397.5	11.44	35.742	
2,500.0	2,458.0	2,418.0	2,285.2	7.6	13.9	6.98	-600.4	271.3	413.1	401.0	12.10	34.134	
2,600.0	2,550.4	2,517.8	2,375.8	8.3	14.7	7.63	-639.2	286.6	417.4	404.6	12.78	32.658	
2,700.0	2,642.8	2,617.6	2,466.4	9.0	15.5	8.27	-678.1	301.9	421.7	408.2	13.47	31.301	
2,800.0	2,735.2	2,717.4	2,557.1	9.7	16.4	8.90	-716.9	317.2	426.0	411.9	14.18	30.051	
2,900.0	2,827.6	2,817.2	2,647.7	10.5	17.2	9.51	-755.8	332.5	430.4	415.5	14.90	28.895	
3,000.0	2,920.0	2,917.0	2,738.4	11.2	18.1	10.11	-794.6	347.8	434.9	419.3	15.63	27.825	
3,100.0	3,012.4	3,016.8	2,829.0	12.0	18.9	10.70	-833.5	363.1	439.4	423.0	16.38	26.831	
3,200.0	3,104.8	3,116.6	2,919.7	12.7	19.8	11.28	-872.3	378.3	443.9	426.8	17.14	25.906	
3,300.0	3,197.1	3,216.4	3,010.3	13.5	20.7	11.85	-911.2	393.6	448.5	430.6	17.91	25.043	
3,400.0	3,289.5	3,316.2	3,100.9	14.3	21.5	12.40	-950.0	408.9	453.1	434.5	18.70	24.236	
3,500.0	3,381.9	3,416.0	3,191.6	15.0	22.4	12.94	-988.9	424.2	457.8	438.3	19.50	23.482	
3,600.0	3,474.3	3,515.8	3,282.2	15.8	23.2	13.48	-1,027.7	439.5	462.5	442.2	20.31	22.773	
3,700.0	3,566.7	3,615.6	3,372.9	16.6	24.1	14.00	-1,066.6	454.8	467.3	446.1	21.14	22.108	
3,800.0	3,659.1	3,715.4	3,463.5	17.4	24.9	14.51	-1,105.4	470.1	472.1	450.1	21.97	21.482	
3,900.0	3,751.5	3,815.2	3,554.2	18.1	25.8	15.01	-1,144.3	485.4	476.9	454.1	22.83	20.892	
4,000.0	3,843.9	3,915.0	3,644.8	18.9	26.6	15.50	-1,183.1	500.7	481.8	458.1	23.69	20.336	
4,100.0	3,936.3	4,014.8	3,735.5	19.7	27.5	15.98	-1,222.0	516.0	486.6	462.1	24.57	19.810	
4,200.0	4,028.7	4,114.6	3,826.1	20.5	28.3	16.45	-1,260.8	531.3	491.6	466.1	25.45	19.312	
4,300.0	4,121.1	4,214.4	3,916.7	21.3	29.2	16.91	-1,299.7	546.6	496.5	470.2	26.35	18.841	
4,400.0	4,213.5	4,314.2	4,007.4	22.0	30.0	17.37	-1,338.5	561.9	501.5	474.3	27.27	18.394	
4,500.0	4,305.9	4,414.0	4,098.0	22.8	30.9	17.81	-1,377.4	577.2	506.6	478.4	28.19	17.970	
4,600.0	4,398.3	4,513.8	4,188.7	23.6	31.7	18.24	-1,416.2	592.5	511.6	482.5	29.12	17.567	
4,700.0	4,490.7	4,613.5	4,279.3	24.4	32.6	18.67	-1,455.1	607.7	516.7	486.6	30.07	17.184	
4,800.0	4,583.1	4,713.3	4,370.0	25.2	33.4	19.09	-1,493.9	623.0	521.8	490.8	31.02	16.819	
4,900.0	4,675.4	4,813.1	4,460.6	26.0	34.3	19.50	-1,532.8	638.3	526.9	494.9	31.99	16.472	
5,000.0	4,767.8	4,912.9	4,551.3	26.8	35.1	19.90	-1,571.6	653.6	532.1	499.1	32.97	16.141	
5,100.0	4,860.2	5,012.7	4,641.9	27.5	36.0	20.30	-1,610.5	668.9	537.3	503.3	33.95	15.825	
5,200.0	4,952.8	5,112.5	4,732.5	28.3	36.9	20.69	-1,649.3	684.2	543.0	508.0	34.93	15.545	
5,300.0	5,046.5	5,212.1	4,823.0	28.8	37.7	20.99	-1,688.1	699.5	551.5	515.7	35.79	15.408	
5,400.0	5,141.4	5,311.4	4,913.2	29.3	38.6	21.19	-1,726.7	714.7	563.3	526.8	36.56	15.407	
5,500.0	5,237.3	5,410.3	5,003.0	29.8	39.4	21.28	-1,765.2	729.8	578.4	541.1	37.24	15.532	
5,600.0	5,334.1	5,508.6	5,092.2	30.2	40.2	21.27	-1,803.5	744.9	596.6	558.8	37.81	15.778	
5,700.0	5,431.8	5,606.2	5,180.9	30.6	41.1	21.17	-1,841.5	759.9	618.1	579.8	38.29	16.141	
5,800.0	5,530.1	5,703.0	5,268.9	30.9	41.9	21.00	-1,879.2	774.7	642.7	604.0	38.68	16.618	
5,900.0	5,629.0	5,799.0	5,356.0	31.2	42.7	20.77	-1,916.5	789.4	670.5	631.6	38.97	17.206	
6,000.0	5,728.4	5,893.9	5,442.2	31.4	43.5	20.50	-1,953.5	804.0	701.5	662.3	39.18	17.904	
6,100.0	5,828.1	5,987.6	5,527.4	31.6	44.3	20.19	-1,990.0	818.3	735.6	696.3	39.31	18.712	
6,200.0	5,928.0	6,080.1	5,611.4	31.7	45.1	19.86	-2,026.0	832.5	772.8	733.5	39.37	19.631	
6,300.0	6,028.0	6,171.3	5,694.2	31.8	45.9	170.76	-2,061.5	846.5	813.1	773.7	39.41	20.629	
6,400.0	6,128.0	6,262.2	5,776.7	31.9	46.7	170.17	-2,096.9	860.4	854.1	814.6	39.59	21.574	
6,500.0	6,228.0	6,353.0	5,859.2	31.9	47.5	169.63	-2,132.2	874.3	895.3	855.5	39.80	22.494	
6,600.0	6,328.0	6,443.8	5,941.7	32.0	48.2	169.14	-2,167.6	888.2	936.5	896.5	40.04	23.388	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

Offset Design PAD X SEC.31-T5N-R65W - COLE X-6 4-8-31 - Wellbore #1 - Plan #7 (3-29-10)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,700.0	6,428.0	6,534.7	6,024.2	32.1	49.0	168.69	-2,202.9	902.1	977.8	937.5	40.31	24.257	
6,800.0	6,528.0	6,630.1	6,110.9	32.2	49.8	168.25	-2,240.1	916.8	1,019.1	978.5	40.60	25.099	
6,900.0	6,628.0	6,773.6	6,242.9	32.3	50.7	167.70	-2,292.3	937.3	1,057.8	1,016.8	40.97	25.818	
7,000.0	6,728.0	6,922.9	6,383.2	32.4	51.5	167.25	-2,340.1	956.1	1,091.8	1,050.4	41.37	26.392	
7,100.0	6,828.0	7,077.7	6,531.1	32.4	52.2	166.88	-2,382.3	972.8	1,120.8	1,079.0	41.79	26.821	
7,200.0	6,928.0	7,237.2	6,685.9	32.5	52.8	166.60	-2,418.0	986.8	1,144.7	1,102.5	42.22	27.112	
7,300.0	7,028.0	7,381.7	6,827.8	32.6	53.3	166.40	-2,443.5	996.9	1,163.3	1,120.7	42.62	27.293	
7,400.0	7,128.0	7,480.2	6,924.8	32.7	53.7	166.29	-2,459.4	1,003.1	1,180.5	1,137.5	42.96	27.476	
7,500.0	7,228.0	7,578.7	7,021.8	32.8	54.1	166.18	-2,475.4	1,009.4	1,197.7	1,154.4	43.31	27.652	
7,537.0	7,265.0	7,615.2	7,057.7	32.8	54.2	166.13	-2,481.2	1,011.7	1,204.1	1,160.7	43.41	27.735	

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

Offset Design PAD X SEC.31-T5N-R65W - SUNSET X-2 2-0-6 - Wellbore #1 - Plan #7 (3-29-10)													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	66.46	7.3	16.7	18.2	18.2	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	66.46	7.3	16.7	18.2	18.0	0.22	81.154		
200.0	200.0	200.0	200.0	0.3	0.3	66.46	7.3	16.7	18.2	17.6	0.67	27.051 CC, ES		
300.0	300.0	299.8	299.8	0.6	0.5	74.45	5.0	18.0	18.7	17.6	1.10	16.908		
400.0	400.0	399.4	399.0	0.8	0.8	94.61	-1.7	21.6	21.7	20.1	1.56	13.899		
500.0	500.0	498.8	497.9	1.0	1.0	115.83	-12.0	24.8	27.6	25.6	2.00	13.807 SF		
600.0	600.0	597.6	595.7	1.2	1.3	133.39	-25.4	26.9	37.2	34.8	2.46	15.155		
700.0	700.0	695.4	692.1	1.5	1.7	146.38	-41.8	27.8	50.8	47.9	2.93	17.364		
800.0	800.0	792.0	786.8	1.7	2.1	155.68	-61.0	27.6	68.2	64.8	3.41	19.996		
900.0	900.0	887.3	879.6	1.9	2.5	162.41	-82.9	26.3	89.3	85.4	3.92	22.795		
1,000.0	1,000.0	981.1	970.1	2.1	3.0	167.40	-107.3	24.0	113.9	109.5	4.44	25.626		
1,100.0	1,100.0	1,073.2	1,058.2	2.4	3.5	171.22	-133.9	20.7	141.8	136.8	4.99	28.424		
1,200.0	1,200.0	1,163.5	1,143.7	2.6	4.0	174.20	-162.6	16.5	172.8	167.3	5.55	31.153		
1,300.0	1,300.0	1,252.3	1,226.9	2.8	4.6	25.20	-193.2	11.5	205.4	199.6	5.79	35.491		
1,400.0	1,399.8	1,340.0	1,308.0	3.0	5.3	27.38	-225.8	5.6	238.1	231.9	6.23	38.219		
1,500.0	1,499.5	1,426.5	1,387.1	3.2	5.9	29.47	-260.2	-1.1	271.0	264.3	6.69	40.517		
1,600.0	1,598.7	1,514.7	1,466.7	3.4	6.6	31.54	-297.5	-8.7	304.1	296.9	7.18	42.376		
1,700.0	1,697.5	1,608.7	1,551.3	3.6	7.4	33.62	-337.7	-17.0	335.4	327.7	7.69	43.602		
1,800.0	1,795.6	1,703.4	1,636.4	3.9	8.2	35.62	-378.2	-25.4	364.6	356.3	8.25	44.201		
1,900.0	1,893.1	1,798.5	1,722.0	4.2	9.0	37.59	-418.9	-33.8	391.6	382.7	8.85	44.234		
2,000.0	1,989.6	1,894.0	1,807.9	4.6	9.8	39.59	-459.7	-42.3	416.5	407.0	9.52	43.757		
2,100.0	2,085.3	1,989.7	1,894.1	5.1	10.6	41.64	-500.7	-50.7	439.5	429.2	10.26	42.820		
2,200.0	2,179.8	2,085.6	1,980.3	5.6	11.4	43.76	-541.7	-59.2	460.7	449.6	11.11	41.480		
2,300.0	2,273.2	2,181.5	2,066.6	6.2	12.2	45.97	-582.7	-67.7	480.2	468.2	12.06	39.806		
2,400.0	2,365.6	2,277.4	2,152.8	6.9	13.1	48.39	-623.7	-76.2	499.0	485.9	13.15	37.940		
2,500.0	2,458.0	2,373.2	2,239.0	7.6	13.9	50.72	-664.7	-84.7	518.6	504.3	14.32	36.209		
2,600.0	2,550.4	2,469.1	2,325.2	8.3	14.7	52.88	-705.7	-93.2	539.0	523.5	15.56	34.646		
2,700.0	2,642.8	2,564.9	2,411.4	9.0	15.5	54.89	-746.7	-101.6	560.1	543.3	16.85	33.248		
2,800.0	2,735.2	2,660.7	2,497.7	9.7	16.3	56.75	-787.7	-110.1	581.9	563.7	18.18	32.005		
2,900.0	2,827.6	2,756.6	2,583.9	10.5	17.1	58.49	-828.7	-118.6	604.2	584.7	19.55	30.902		
3,000.0	2,920.0	2,852.4	2,670.1	11.2	18.0	60.10	-869.7	-127.1	627.0	606.1	20.95	29.924		
3,100.0	3,012.4	2,948.3	2,756.3	12.0	18.8	61.60	-910.7	-135.6	650.3	627.9	22.38	29.056		
3,200.0	3,104.8	3,044.1	2,842.5	12.7	19.6	63.00	-951.7	-144.1	674.0	650.1	23.83	28.286		
3,300.0	3,197.1	3,140.0	2,928.7	13.5	20.4	64.31	-992.7	-152.5	698.0	672.7	25.29	27.600		
3,400.0	3,289.5	3,235.8	3,014.9	14.3	21.2	65.53	-1,033.7	-161.0	722.4	695.6	26.77	26.988		
3,500.0	3,381.9	3,331.6	3,101.2	15.0	22.1	66.67	-1,074.7	-169.5	747.0	718.8	28.25	26.440		
3,600.0	3,474.3	3,427.5	3,187.4	15.8	22.9	67.74	-1,115.7	-178.0	771.9	742.2	29.75	25.948		
3,700.0	3,566.7	3,523.3	3,273.6	16.6	23.7	68.75	-1,156.7	-186.5	797.1	765.9	31.25	25.505		
3,800.0	3,659.1	3,619.2	3,359.8	17.4	24.5	69.69	-1,197.7	-195.0	822.5	789.7	32.76	25.105		
3,900.0	3,751.5	3,715.0	3,446.0	18.1	25.3	70.58	-1,238.7	-203.4	848.1	813.8	34.28	24.743		
4,000.0	3,843.9	3,810.9	3,532.2	18.9	26.2	71.42	-1,279.7	-211.9	873.9	838.1	35.79	24.414		
4,100.0	3,936.3	3,906.7	3,618.5	19.7	27.0	72.21	-1,320.7	-220.4	899.8	862.5	37.31	24.115		
4,200.0	4,028.7	4,002.5	3,704.7	20.5	27.8	72.95	-1,361.7	-228.9	925.9	887.0	38.83	23.841		
4,300.0	4,121.1	4,098.4	3,790.9	21.3	28.6	73.66	-1,402.7	-237.4	952.1	911.7	40.36	23.591		
4,400.0	4,213.5	4,194.2	3,877.1	22.0	29.4	74.32	-1,443.7	-245.9	978.5	936.6	41.88	23.361		
4,500.0	4,305.9	4,290.1	3,963.3	22.8	30.3	74.96	-1,484.7	-254.3	1,004.9	961.5	43.41	23.150		
4,600.0	4,398.3	4,385.9	4,049.5	23.6	31.1	75.56	-1,525.7	-262.8	1,031.5	986.6	44.94	22.955		
4,700.0	4,490.7	4,481.8	4,135.8	24.4	31.9	76.13	-1,566.7	-271.3	1,058.2	1,011.7	46.46	22.775		
4,800.0	4,583.1	4,577.6	4,222.0	25.2	32.7	76.67	-1,607.7	-279.8	1,085.0	1,037.0	47.99	22.608		
4,900.0	4,675.4	4,673.4	4,308.2	26.0	33.5	77.19	-1,648.7	-288.3	1,111.9	1,062.3	49.52	22.453		
5,000.0	4,767.8	4,769.3	4,394.4	26.8	34.4	77.68	-1,689.7	-296.8	1,138.8	1,087.8	51.05	22.309		
5,100.0	4,860.2	4,865.1	4,480.6	27.5	35.2	78.15	-1,730.7	-305.2	1,165.8	1,113.3	52.57	22.175		

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
PAD X SEC.31-T5N-R65W - SUNSET X-2 2-0-6 - Wellbore #1 - Plan #7 (3-29-10)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	4,952.8	4,961.0	4,566.8	28.3	36.0	78.87	-1,771.7	-313.7	1,193.0	1,138.9	54.12	22.044	
5,300.0	5,046.5	5,056.9	4,653.1	28.8	36.8	79.70	-1,812.7	-322.2	1,220.8	1,165.3	55.52	21.989	
5,400.0	5,141.4	5,152.8	4,739.3	29.3	37.7	80.37	-1,853.7	-330.7	1,249.2	1,192.4	56.83	21.982	
5,500.0	5,237.3	5,248.4	4,825.4	29.8	38.5	80.89	-1,894.6	-339.2	1,278.2	1,220.2	58.05	22.020	
5,600.0	5,334.1	5,343.9	4,911.2	30.2	39.3	81.26	-1,935.5	-347.6	1,307.7	1,248.5	59.17	22.101	
5,700.0	5,431.8	5,438.9	4,996.7	30.6	40.1	81.51	-1,976.1	-356.0	1,337.8	1,277.6	60.20	22.223	
5,800.0	5,530.1	5,533.4	5,081.7	30.9	40.9	81.64	-2,016.5	-364.4	1,368.4	1,307.3	61.13	22.384	
5,900.0	5,629.0	5,627.2	5,166.1	31.2	41.7	81.66	-2,056.7	-372.7	1,399.6	1,337.7	61.97	22.585	
6,000.0	5,728.4	5,720.3	5,249.9	31.4	42.5	81.58	-2,096.5	-380.9	1,431.5	1,368.8	62.72	22.825	
6,100.0	5,828.1	5,812.6	5,332.9	31.6	43.3	81.43	-2,136.0	-389.1	1,464.2	1,400.8	63.37	23.105	
6,200.0	5,928.0	5,903.9	5,415.0	31.7	44.1	81.20	-2,175.0	-397.2	1,497.6	1,433.7	63.94	23.423	
6,300.0	6,028.0	5,994.1	5,496.2	31.8	44.9	-127.97	-2,213.6	-405.2	1,532.0	1,467.6	64.33	23.813	
6,400.0	6,128.0	6,084.1	5,577.1	31.9	45.6	-128.96	-2,252.1	-413.1	1,566.9	1,502.5	64.46	24.310	
6,500.0	6,228.0	6,174.0	5,658.0	31.9	46.4	-129.92	-2,290.6	-421.1	1,602.3	1,537.7	64.57	24.813	
6,600.0	6,328.0	6,264.0	5,738.9	32.0	47.2	-130.83	-2,329.1	-429.1	1,638.0	1,573.3	64.69	25.320	
6,700.0	6,428.0	6,353.9	5,819.9	32.1	48.0	-131.71	-2,367.5	-437.0	1,674.2	1,609.4	64.81	25.831	
6,800.0	6,528.0	6,443.9	5,900.8	32.2	48.7	-132.55	-2,406.0	-445.0	1,710.7	1,645.7	64.93	26.345	
6,900.0	6,628.0	6,576.1	6,020.2	32.3	49.7	-133.71	-2,461.5	-456.5	1,747.0	1,682.1	64.97	26.890	
7,000.0	6,728.0	6,770.1	6,199.6	32.4	50.7	-135.12	-2,533.7	-471.4	1,779.3	1,714.4	64.94	27.398	
7,100.0	6,828.0	6,974.2	6,393.3	32.4	51.6	-136.27	-2,596.6	-484.4	1,806.2	1,741.2	64.99	27.791	
7,200.0	6,928.0	7,187.3	6,599.9	32.5	52.4	-137.15	-2,647.6	-495.0	1,827.3	1,762.2	65.11	28.062	
7,300.0	7,028.0	7,341.8	6,751.7	32.6	52.9	-137.62	-2,675.6	-500.8	1,843.0	1,777.7	65.29	28.227	
7,400.0	7,128.0	7,440.3	6,848.7	32.7	53.3	-137.89	-2,692.4	-504.2	1,858.0	1,792.5	65.48	28.374	
7,500.0	7,228.0	7,538.7	6,945.6	32.8	53.7	-138.16	-2,709.1	-507.7	1,873.0	1,807.3	65.68	28.519	
7,537.0	7,265.0	7,575.2	6,981.6	32.8	53.8	-138.26	-2,715.3	-509.0	1,878.6	1,812.9	65.73	28.581	

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

PAD X SEC.31-T5N-R65W - VALLEY PACK X-5 3-5-31 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 493-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-117.59	-7.3	-13.9	15.7	15.7	0.00	N/A CC	
100.0	100.0	100.0	100.0	0.1	0.1	-117.96	-7.4	-13.9	15.8	15.5	0.23	69.794	
200.0	200.0	200.0	200.0	0.3	0.2	-119.07	-7.7	-13.8	15.8	15.3	0.56	28.107	
300.0	300.0	300.0	300.0	0.6	0.3	-120.89	-8.2	-13.7	16.0	15.1	0.90	17.750	
400.0	400.0	400.0	400.0	0.8	0.5	-123.38	-8.9	-13.6	16.3	15.0	1.24	13.113 ES	
500.0	500.0	499.9	499.9	1.0	0.6	-126.46	-9.9	-13.4	16.6	15.0	1.58	10.491	
600.0	600.0	599.9	599.9	1.2	0.8	-129.40	-10.9	-13.3	17.2	15.2	2.02	8.513	
700.0	700.0	699.8	699.8	1.5	1.0	-131.86	-12.1	-13.5	18.1	15.6	2.45	7.360	
800.0	800.0	799.8	799.8	1.7	1.2	-134.10	-13.3	-13.7	19.1	16.2	2.89	6.608	
900.0	900.0	899.8	899.8	1.9	1.4	-136.76	-14.6	-13.8	20.1	16.8	3.32	6.054	
1,000.0	1,000.0	999.8	999.8	2.1	1.6	-138.94	-15.9	-13.8	21.0	17.3	3.74	5.621	
1,100.0	1,100.0	1,099.9	1,099.8	2.4	1.8	-140.61	-16.9	-13.9	21.9	17.8	4.17	5.261	
1,200.0	1,200.0	1,199.9	1,199.8	2.6	2.0	-142.30	-18.0	-13.9	22.8	18.2	4.60	4.948	
1,300.0	1,300.0	1,299.8	1,299.7	2.8	2.2	67.86	-19.4	-13.7	23.0	18.0	5.01	4.600	
1,400.0	1,399.8	1,399.8	1,399.7	3.0	2.4	77.64	-20.7	-13.4	22.2	16.9	5.39	4.123	
1,457.6	1,457.3	1,457.3	1,457.2	3.1	2.6	87.59	-21.5	-13.2	21.9	16.3	5.63	3.894	
1,500.0	1,499.5	1,499.5	1,499.4	3.2	2.6	96.93	-22.0	-13.1	22.2	16.4	5.80	3.832 SF	
1,600.0	1,598.7	1,598.8	1,598.7	3.4	2.9	121.69	-23.0	-13.0	26.4	20.2	6.20	4.263	
1,700.0	1,697.5	1,697.6	1,697.6	3.6	3.1	141.40	-23.7	-13.0	36.8	30.3	6.58	5.598	
1,800.0	1,795.6	1,795.9	1,795.9	3.9	3.3	153.41	-24.5	-13.1	52.8	45.8	6.96	7.587	
1,900.0	1,893.1	1,893.7	1,893.6	4.2	3.5	161.14	-24.9	-12.6	73.1	65.7	7.33	9.968	
2,000.0	1,989.6	1,990.3	1,990.2	4.6	3.7	166.41	-24.8	-11.6	97.3	89.6	7.70	12.642	
2,100.0	2,085.3	2,085.5	2,085.4	5.1	3.9	169.99	-24.3	-10.4	125.6	117.5	8.07	15.565	
2,200.0	2,179.8	2,179.7	2,179.6	5.6	4.1	172.47	-23.3	-9.4	158.0	149.6	8.44	18.718	
2,300.0	2,273.2	2,273.8	2,273.7	6.2	4.3	174.10	-23.0	-8.5	193.4	184.6	8.82	21.940	
2,400.0	2,365.6	2,365.7	2,365.6	6.9	4.4	175.23	-22.6	-7.9	231.4	222.1	9.25	25.017	
2,500.0	2,458.0	2,459.5	2,459.4	7.6	4.6	176.06	-22.4	-7.3	269.4	259.7	9.71	27.736	
2,600.0	2,550.4	2,558.4	2,558.2	8.3	4.9	176.60	-23.4	-6.5	306.4	296.2	10.19	30.061	
2,700.0	2,642.8	2,664.8	2,664.6	9.0	5.1	176.81	-28.1	-5.1	340.5	329.8	10.70	31.835	
2,800.0	2,735.2	2,775.0	2,774.4	9.7	5.3	176.90	-37.0	-1.7	370.7	359.5	11.21	33.057	
2,900.0	2,827.6	2,885.6	2,884.1	10.5	5.6	176.82	-50.2	3.1	397.1	385.4	11.75	33.799	
3,000.0	2,920.0	2,989.2	2,986.4	11.2	5.9	176.53	-65.8	7.7	420.9	408.6	12.29	34.252	
3,100.0	3,012.4	3,107.9	3,102.8	12.0	6.2	176.37	-86.6	16.1	441.1	428.2	12.86	34.284	
3,200.0	3,104.8	3,200.3	3,193.4	12.7	6.5	176.32	-103.5	23.6	460.2	446.8	13.39	34.366	
3,300.0	3,197.1	3,294.7	3,286.0	13.5	6.8	176.12	-120.8	29.8	480.1	466.2	13.93	34.457	
3,400.0	3,289.5	3,387.7	3,377.4	14.3	7.0	175.87	-137.2	34.8	501.3	486.8	14.48	34.618	
3,500.0	3,381.9	3,492.6	3,480.4	15.0	7.4	175.62	-156.2	40.9	521.7	506.7	15.06	34.645	
3,600.0	3,474.3	3,589.5	3,575.5	15.8	7.7	175.41	-174.0	46.8	541.9	526.3	15.62	34.688	
3,700.0	3,566.7	3,693.5	3,677.4	16.6	8.0	175.27	-193.0	53.8	561.9	545.7	16.20	34.677	
3,800.0	3,659.1	3,801.5	3,783.0	17.4	8.4	175.23	-213.8	62.8	580.0	563.2	16.80	34.530	
3,900.0	3,751.5	3,902.1	3,881.2	18.1	8.8	175.18	-234.0	71.6	597.2	579.9	17.38	34.359	
4,000.0	3,843.9	3,992.7	3,969.6	18.9	9.1	175.07	-252.4	78.9	614.8	596.9	17.95	34.255	
4,100.0	3,936.3	4,080.7	4,055.8	19.7	9.4	174.93	-269.2	84.7	634.1	615.6	18.51	34.253	
4,200.0	4,028.7	4,174.3	4,147.6	20.5	9.8	174.68	-286.8	89.2	654.6	635.5	19.10	34.271	
4,300.0	4,121.1	4,281.1	4,252.3	21.3	10.2	174.35	-307.5	93.9	674.9	655.2	19.73	34.198	
4,400.0	4,213.5	4,388.7	4,357.4	22.0	10.6	174.12	-329.3	100.4	693.5	673.1	20.37	34.051	
4,500.0	4,305.9	4,483.7	4,450.3	22.8	10.9	174.06	-348.0	107.8	711.7	690.7	20.95	33.967	
4,600.0	4,398.3	4,573.8	4,538.5	23.6	11.3	174.01	-365.0	114.4	730.7	709.2	21.53	33.943	
4,700.0	4,490.7	4,666.7	4,629.6	24.4	11.6	173.89	-382.4	120.0	750.7	728.6	22.12	33.939	
4,800.0	4,583.1	4,778.4	4,739.1	25.2	12.0	173.82	-403.1	127.7	770.3	747.6	22.75	33.858	
4,900.0	4,675.4	4,874.8	4,833.4	26.0	12.4	173.77	-421.7	134.9	789.0	765.6	23.35	33.789	
5,000.0	4,767.8	4,985.7	4,941.6	26.8	12.9	173.59	-444.9	142.3	806.7	782.7	24.01	33.597	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

Offset Design PAD X SEC.31-T5N-R65W - VALLEY PACK X-5 3-5-31 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 493-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	4,860.2	5,081.1	5,034.6	27.5	13.2	173.46	-464.8	148.9	824.4	799.8	24.63	33.475	
5,200.0	4,952.8	5,189.0	5,139.6	28.3	13.7	173.36	-488.2	157.5	840.3	815.0	25.32	33.182	
5,300.0	5,046.5	5,269.9	5,218.6	28.8	14.0	173.32	-504.7	163.8	854.3	828.4	25.94	32.932	
5,400.0	5,141.4	5,343.0	5,290.3	29.3	14.3	173.31	-518.0	169.3	867.1	840.6	26.49	32.729	
5,500.0	5,237.3	5,422.3	5,368.4	29.8	14.6	173.33	-530.4	174.6	879.0	852.0	27.01	32.546	
5,600.0	5,334.1	5,504.0	5,449.3	30.2	14.8	173.35	-541.0	179.1	890.1	862.6	27.48	32.393	
5,700.0	5,431.8	5,585.0	5,529.7	30.6	15.1	173.36	-550.2	183.0	899.7	871.8	27.90	32.245	
5,800.0	5,530.1	5,670.2	5,614.5	30.9	15.3	173.39	-558.0	186.4	907.8	879.5	28.28	32.096	
5,900.0	5,629.0	5,762.7	5,706.5	31.2	15.6	173.38	-565.8	189.7	913.6	884.9	28.64	31.900	
6,000.0	5,728.4	5,853.3	5,796.8	31.4	15.8	173.40	-572.3	193.1	916.7	887.7	28.94	31.677	
6,100.0	5,828.1	5,939.6	5,883.0	31.6	16.0	173.47	-576.9	196.6	917.6	888.4	29.17	31.458	
6,200.0	5,928.0	6,025.1	5,968.3	31.7	16.2	173.70	-578.6	201.9	916.7	887.3	29.32	31.261	
6,300.0	6,028.0	6,109.8	6,052.8	31.8	16.3	-34.73	-578.8	207.0	913.9	884.4	29.48	31.000	
6,400.0	6,128.0	6,188.0	6,131.0	31.9	16.4	-34.56	-578.3	209.8	912.4	882.7	29.76	30.661	
6,447.0	6,174.9	6,232.0	6,174.9	31.9	16.5	-34.50	-577.8	210.7	912.4	882.4	29.90	30.509	
6,500.0	6,228.0	6,282.0	6,224.9	31.9	16.6	-34.42	-577.0	211.7	912.4	882.4	30.07	30.344	
6,600.0	6,328.0	6,376.0	6,318.9	32.0	16.7	-34.28	-575.1	213.2	913.2	882.8	30.38	30.057	
6,700.0	6,428.0	6,472.6	6,415.5	32.1	16.9	-34.15	-573.0	214.1	914.5	883.8	30.71	29.784	
6,800.0	6,528.0	6,576.7	6,519.5	32.2	17.0	-34.03	-570.9	215.0	915.7	884.6	31.04	29.495	
6,900.0	6,628.0	6,678.5	6,621.4	32.3	17.2	-33.93	-569.3	215.9	916.5	885.1	31.38	29.202	
7,000.0	6,728.0	6,781.4	6,724.3	32.4	17.3	-33.84	-568.0	216.8	917.1	885.3	31.73	28.902	
7,100.0	6,828.0	6,884.6	6,827.4	32.4	17.5	-33.75	-567.0	217.8	917.3	885.2	32.08	28.594	
7,200.0	6,928.0	6,986.6	6,929.4	32.5	17.7	-33.67	-566.4	218.9	917.2	884.8	32.43	28.280	
7,300.0	7,028.0	7,087.4	7,030.2	32.6	17.8	-33.61	-566.0	219.9	917.0	884.2	32.79	27.968	
7,400.0	7,128.0	7,188.9	7,131.6	32.7	18.0	-33.53	-565.6	221.1	916.7	883.6	33.14	27.658	
7,500.0	7,228.0	7,291.6	7,234.4	32.8	18.2	-33.44	-565.3	222.5	916.2	882.7	33.50	27.345	
7,537.0	7,265.0	7,329.2	7,272.0	32.8	18.2	-33.41	-565.2	223.1	915.9	882.3	33.61	27.253	

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

PAD Z SEC.31-T5N-R65W - PERCY Z3 4-2-6 - Wellbore #1 - Plan #4 (3-29-10)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	67.78	18.2	44.6	48.2					
100.0	100.0	100.0	100.0	0.1	0.1	67.78	18.2	44.6	48.2	47.9	0.22	214.310		
200.0	200.0	200.0	200.0	0.3	0.3	67.78	18.2	44.6	48.2	47.5	0.67	71.437		
300.0	300.0	300.3	300.2	0.6	0.5	71.43	15.2	45.4	47.9	46.8	1.10	43.373		
343.9	343.9	344.1	343.9	0.7	0.7	75.34	12.1	46.2	47.8	46.4	1.30	36.634 CC, ES		
400.0	400.0	399.8	399.3	0.8	0.8	82.31	6.4	47.7	48.1	46.6	1.56	30.850		
500.0	500.0	497.8	496.2	1.0	1.1	98.76	-7.9	51.4	52.2	50.1	2.06	25.315		
600.0	600.0	593.8	590.0	1.2	1.5	115.85	-27.4	56.5	63.6	61.0	2.56	24.865 SF		
700.0	700.0	687.0	679.9	1.5	1.9	129.28	-51.4	62.8	83.6	80.5	3.04	27.514		
800.0	800.0	777.2	765.3	1.7	2.5	138.50	-79.2	70.1	111.3	107.8	3.53	31.536		
900.0	900.0	863.8	845.7	1.9	3.1	144.64	-110.2	78.2	145.6	141.6	4.05	35.953		
1,000.0	1,000.0	946.6	921.0	2.1	3.8	148.82	-143.7	87.0	185.6	181.0	4.60	40.345		
1,100.0	1,100.0	1,025.6	991.0	2.4	4.5	151.74	-178.9	96.2	230.5	225.4	5.17	44.571		
1,200.0	1,200.0	1,100.0	1,055.3	2.6	5.2	153.85	-215.2	105.7	280.0	274.2	5.76	48.630		
1,300.0	1,300.0	1,172.3	1,116.1	2.8	5.9	4.07	-253.0	115.6	332.0	325.9	6.09	54.535		
1,400.0	1,399.8	1,253.0	1,182.5	3.0	6.8	5.41	-297.4	127.2	384.0	377.4	6.56	58.542		
1,500.0	1,499.5	1,339.6	1,253.7	3.2	7.8	6.51	-345.2	139.7	433.3	426.2	7.04	61.519		
1,600.0	1,598.7	1,427.9	1,326.2	3.4	8.8	7.42	-393.9	152.4	479.7	472.1	7.55	63.490		
1,700.0	1,697.5	1,517.7	1,400.0	3.6	9.8	8.20	-443.4	165.4	523.1	515.0	8.09	64.633		
1,800.0	1,795.6	1,608.9	1,474.9	3.9	10.9	8.90	-493.7	178.5	563.5	554.8	8.66	65.098		
1,900.0	1,893.1	1,701.4	1,550.9	4.2	11.9	9.55	-544.8	191.9	600.8	591.5	9.24	65.004		
2,000.0	1,989.6	1,795.1	1,627.8	4.6	13.0	10.18	-596.4	205.4	634.9	625.1	9.85	64.450		
2,100.0	2,085.3	1,889.8	1,705.6	5.1	14.1	10.79	-648.7	219.1	665.9	655.5	10.48	63.516		
2,200.0	2,179.8	1,985.5	1,784.2	5.6	15.1	11.40	-701.5	232.9	693.8	682.6	11.14	62.264		
2,300.0	2,273.2	2,082.0	1,863.5	6.2	16.2	12.03	-754.7	246.8	718.4	706.6	11.83	60.744		
2,400.0	2,365.6	2,179.0	1,943.3	6.9	17.4	12.73	-808.2	260.8	740.8	728.3	12.55	59.007		
2,500.0	2,458.0	2,276.1	2,023.0	7.6	18.5	13.41	-861.8	274.8	763.2	749.9	13.31	57.348		
2,600.0	2,550.4	2,373.2	2,102.7	8.3	19.6	14.05	-915.3	288.9	785.7	771.6	14.08	55.797		
2,700.0	2,642.8	2,470.2	2,182.5	9.0	20.7	14.66	-968.9	302.9	808.3	793.4	14.87	54.347		
2,800.0	2,735.2	2,567.3	2,262.2	9.7	21.8	15.24	-1,022.4	316.9	830.9	815.3	15.68	52.992		
2,900.0	2,827.6	2,664.4	2,342.0	10.5	22.9	15.78	-1,075.9	330.9	853.7	837.2	16.50	51.726		
3,000.0	2,920.0	2,761.4	2,421.7	11.2	24.0	16.30	-1,129.5	344.9	876.5	859.1	17.34	50.540		
3,100.0	3,012.4	2,858.5	2,501.4	12.0	25.1	16.79	-1,183.0	358.9	899.4	881.2	18.19	49.431		
3,200.0	3,104.8	2,955.6	2,581.2	12.7	26.2	17.26	-1,236.6	372.9	922.3	903.2	19.06	48.391		
3,300.0	3,197.1	3,052.6	2,660.9	13.5	27.3	17.70	-1,290.1	386.9	945.3	925.3	19.94	47.416		
3,400.0	3,289.5	3,149.7	2,740.7	14.3	28.5	18.13	-1,343.6	400.9	968.3	947.5	20.82	46.500		
3,500.0	3,381.9	3,246.7	2,820.4	15.0	29.6	18.53	-1,397.2	414.9	991.4	969.7	21.72	45.640		
3,600.0	3,474.3	3,343.8	2,900.2	15.8	30.7	18.92	-1,450.7	428.9	1,014.5	991.9	22.63	44.830		
3,700.0	3,566.7	3,440.9	2,979.9	16.6	31.8	19.29	-1,504.3	443.0	1,037.7	1,014.1	23.55	44.067		
3,800.0	3,659.1	3,537.9	3,059.6	17.4	32.9	19.64	-1,557.8	457.0	1,060.9	1,036.4	24.47	43.348		
3,900.0	3,751.5	3,635.0	3,139.4	18.1	34.0	19.97	-1,611.4	471.0	1,084.2	1,058.7	25.41	42.668		
4,000.0	3,843.9	3,732.1	3,219.1	18.9	35.1	20.30	-1,664.9	485.0	1,107.4	1,081.1	26.35	42.026		
4,100.0	3,936.3	3,829.1	3,298.9	19.7	36.2	20.61	-1,718.4	499.0	1,130.7	1,103.4	27.30	41.419		
4,200.0	4,028.7	3,926.2	3,378.6	20.5	37.3	20.91	-1,772.0	513.0	1,154.1	1,125.8	28.26	40.844		
4,300.0	4,121.1	4,023.3	3,458.3	21.3	38.5	21.19	-1,825.5	527.0	1,177.5	1,148.2	29.22	40.298		
4,400.0	4,213.5	4,120.3	3,538.1	22.0	39.6	21.47	-1,879.1	541.0	1,200.9	1,170.7	30.19	39.780		
4,500.0	4,305.9	4,217.4	3,617.8	22.8	40.7	21.73	-1,932.6	555.0	1,224.3	1,193.1	31.16	39.288		
4,600.0	4,398.3	4,314.5	3,697.6	23.6	41.8	21.98	-1,986.2	569.0	1,247.7	1,215.6	32.14	38.820		
4,700.0	4,490.7	4,411.5	3,777.3	24.4	42.9	22.23	-2,039.7	583.1	1,271.2	1,238.1	33.13	38.375		
4,800.0	4,583.1	4,508.6	3,857.0	25.2	44.0	22.46	-2,093.2	597.1	1,294.7	1,260.6	34.12	37.950		
4,900.0	4,675.4	4,605.7	3,936.8	26.0	45.1	22.69	-2,146.8	611.1	1,318.2	1,283.1	35.11	37.545		
5,000.0	4,767.8	4,702.7	4,016.5	26.8	46.2	22.91	-2,200.3	625.1	1,341.7	1,305.6	36.11	37.159		

Company:	Mineral Resources Inc	Local Co-ordinate Reference:	Well RE-1 X-7 4-6-31
Project:	SEC.31-T5N-R65W	TVD Reference:	WELL @ 4673.0ft (Original Well Elev)
Reference Site:	PAD X SEC.31-T5N-R65W	MD Reference:	WELL @ 4673.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	RE-1 X-7 4-6-31	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #5 (3-29-10)	Offset TVD Reference:	Offset Datum

Offset Design PAD Z SEC.31-T5N-R65W - PERCY Z3 4-2-6 - Wellbore #1 - Plan #4 (3-29-10)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	4,860.2	4,799.8	4,096.3	27.5	47.4	23.12	-2,253.9	639.1	1,365.3	1,328.2	37.11	36.790	
5,200.0	4,952.8	4,896.8	4,175.9	28.3	48.5	23.42	-2,307.4	653.1	1,389.3	1,351.2	38.07	36.492	
5,300.0	5,046.5	4,993.1	4,255.0	28.8	49.6	23.79	-2,360.5	667.0	1,416.0	1,377.1	38.91	36.391	
5,400.0	5,141.4	5,088.5	4,333.4	29.3	50.7	24.11	-2,413.1	680.8	1,445.9	1,406.2	39.69	36.431	
5,500.0	5,237.3	5,182.9	4,411.0	29.8	51.7	24.41	-2,465.2	694.4	1,478.7	1,438.3	40.40	36.605	
5,600.0	5,334.1	5,276.3	4,487.7	30.2	52.8	24.69	-2,516.7	707.9	1,514.5	1,473.5	41.04	36.906	
5,700.0	5,431.8	5,368.4	4,563.4	30.6	53.9	24.94	-2,567.5	721.2	1,553.3	1,511.7	41.61	37.328	
5,800.0	5,530.1	5,459.2	4,638.0	30.9	54.9	25.17	-2,617.6	734.3	1,595.0	1,552.9	42.12	37.866	
5,900.0	5,629.0	5,548.6	4,711.4	31.2	55.9	25.40	-2,666.9	747.2	1,639.5	1,597.0	42.57	38.516	
6,000.0	5,728.4	5,636.4	4,783.6	31.4	56.9	25.61	-2,715.4	759.8	1,686.9	1,644.0	42.95	39.274	
6,100.0	5,828.1	5,722.6	4,854.4	31.6	57.9	25.82	-2,762.9	772.3	1,737.1	1,693.8	43.28	40.134	
6,200.0	5,928.0	5,807.1	4,923.7	31.7	58.9	26.04	-2,809.5	784.5	1,789.9	1,746.4	43.56	41.092	
6,300.0	6,028.0	5,889.7	4,991.6	31.8	59.8	177.41	-2,855.1	796.4	1,845.4	1,801.6	43.79	42.138	
6,400.0	6,128.0	5,971.8	5,059.1	31.9	60.8	177.06	-2,900.4	808.3	1,901.6	1,857.5	44.03	43.191	
6,500.0	6,228.0	6,054.0	5,126.6	31.9	61.7	176.72	-2,945.7	820.1	1,957.8	1,913.5	44.28	44.217	

Reference Depths are relative to WELL @ 4673.0ft (Original Well Elev) Coordinates are relative to: RE-1 X-7 4-6-31
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.51°

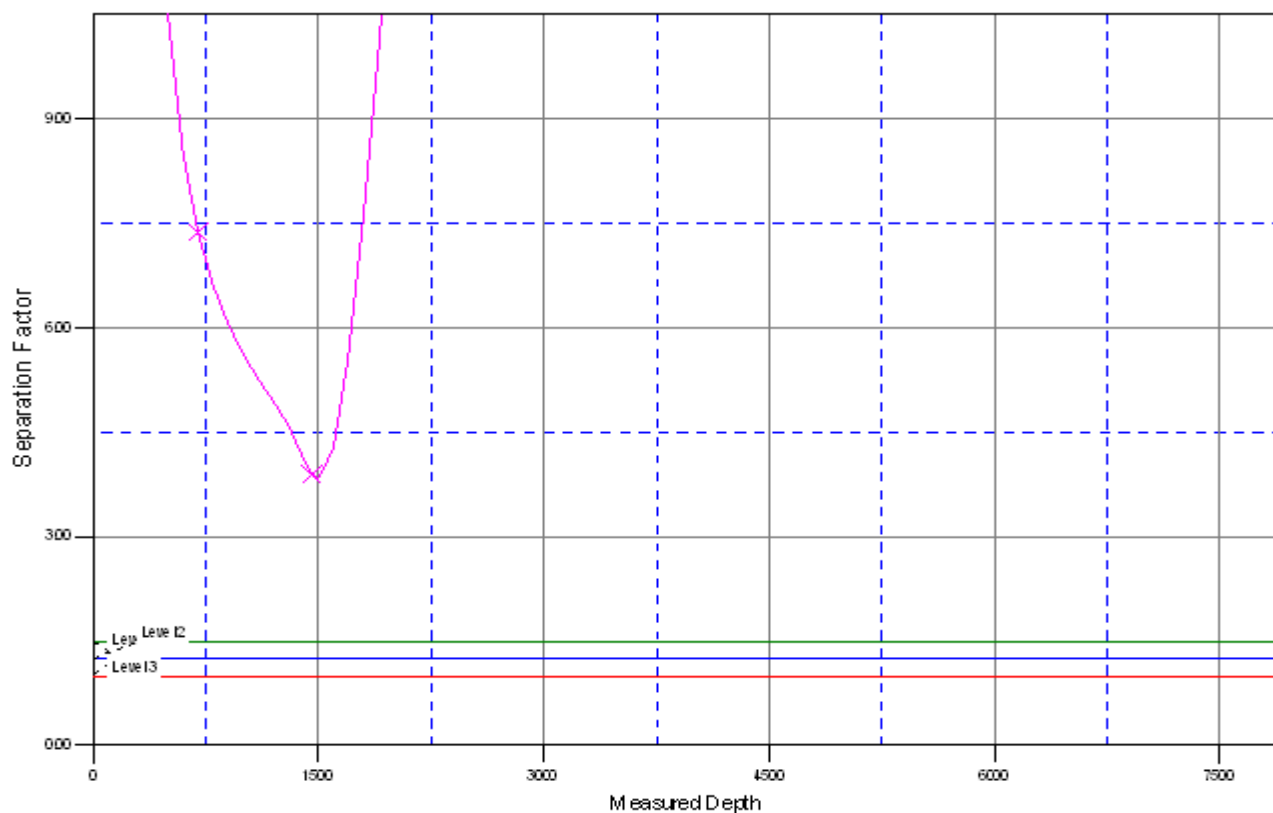


Company: Mineral Resources Inc
Project: SEC.31-T5N-R65W
Reference Site: PAD X SEC.31-T5N-R65W
Site Error: 0.0ft
Reference Well: RE-1 X-7 4-6-31
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #5 (3-29-10)

Local Co-ordinate Reference: Well RE-1 X-7 4-6-31
TVD Reference: WELL @ 4673.0ft (Original Well Elev)
MD Reference: WELL @ 4673.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM den0-adp01 Server Data
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4673.0ft (Original Well Elev) Coordinates are relative to: RE-1 X-7 4-6-31
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.51°

Separation Factor Plot



LEGEND

4-8-31, Wellbore #1, Plan #7 (3-29-10) \V0 SUNSETX-2 2-0-6, Wellbore #1, Plan #7 (3-29-10) \V0
PACX-5 3-5-31, Wellbore #1, Wellbore #1 \V0 PERCYZ3 4-2-6, Wellbore #1, Plan #4 (3-29-10) \V0